

**Amendments to the Claims:**

This listing of claims will replace all prior versions, and listings, of claims in the application:

**Listing of Claims:**

1. (Currently Amended) A method of heating a gas sensor including a ceramic substrate and a heater embedded in said substrate by controlling a temperature of said heater, said method comprising the steps of:

increasing the temperature of said heater at a first rate rapidly when the temperature of said substrate is below a predetermined temperature low; and

increasing the temperature of said heater at a second rate which is lower than said first rate slowly when the temperature of said substrate is above a predetermined temperature high.

2. (Currently Amended) A method according to claim 1, wherein the temperature of said heater is increased at said second rate slowly when the temperature of said substrate is equal to or greater than 600 degrees centigrade.

3. (Currently Amended) A method according to claim 1, wherein the temperature of said heater is increased at a speed equal to or less than 40 degrees centigrade/sec. when the temperature of said substrate is equal to or greater than 600 degrees centigrade.

4. (Currently Amended) A method according to claim 1, wherein the temperature of said heater is increased at said first rate rapidly when the temperature of said substrate is equal to or less than 500 degrees centigrade.

5. (Currently Amended) A method according to claim 1, wherein the temperature of said heater is increased at a speed within a range greater than 20 degrees

centigrade/sec., but equal to or less than 100 degrees centigrade/sec. when the temperature of said substrate is equal to or less than 500 degrees centigrade.

6. (Currently Amended) A method according to claim 1, wherein a voltage applied to said heater changes depending on the time passed for increasing the temperature of said heater, according to an exponential curve.

7. (Currently Amended) A method according to claim 1, wherein said heater has a heating unit, and a resistance of said heating unit is measured and controlled for increasing the temperature of said heater.

8. (Currently Amended) A gas sensor having a ceramic substrate and a heater embedded in said substrate, said gas sensor comprising:

means for measuring a resistance of a heating unit of said heater; and  
means for controlling a rate of increasing the resistance of said heating unit per unit time.

9. (Currently Amended) A gas sensor according to claim 8, wherein said resistance measuring means comprises at least one measuring lead for measuring the resistance of said heating unit.